

New Myriopoda from Southern Africa.

By

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With 8 Text-figures.

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DIPLOPODA (POLYDESMOIDEA)

Family GOMPHODESMIDAE

Genus *Ulodesmus* O. F. Cook

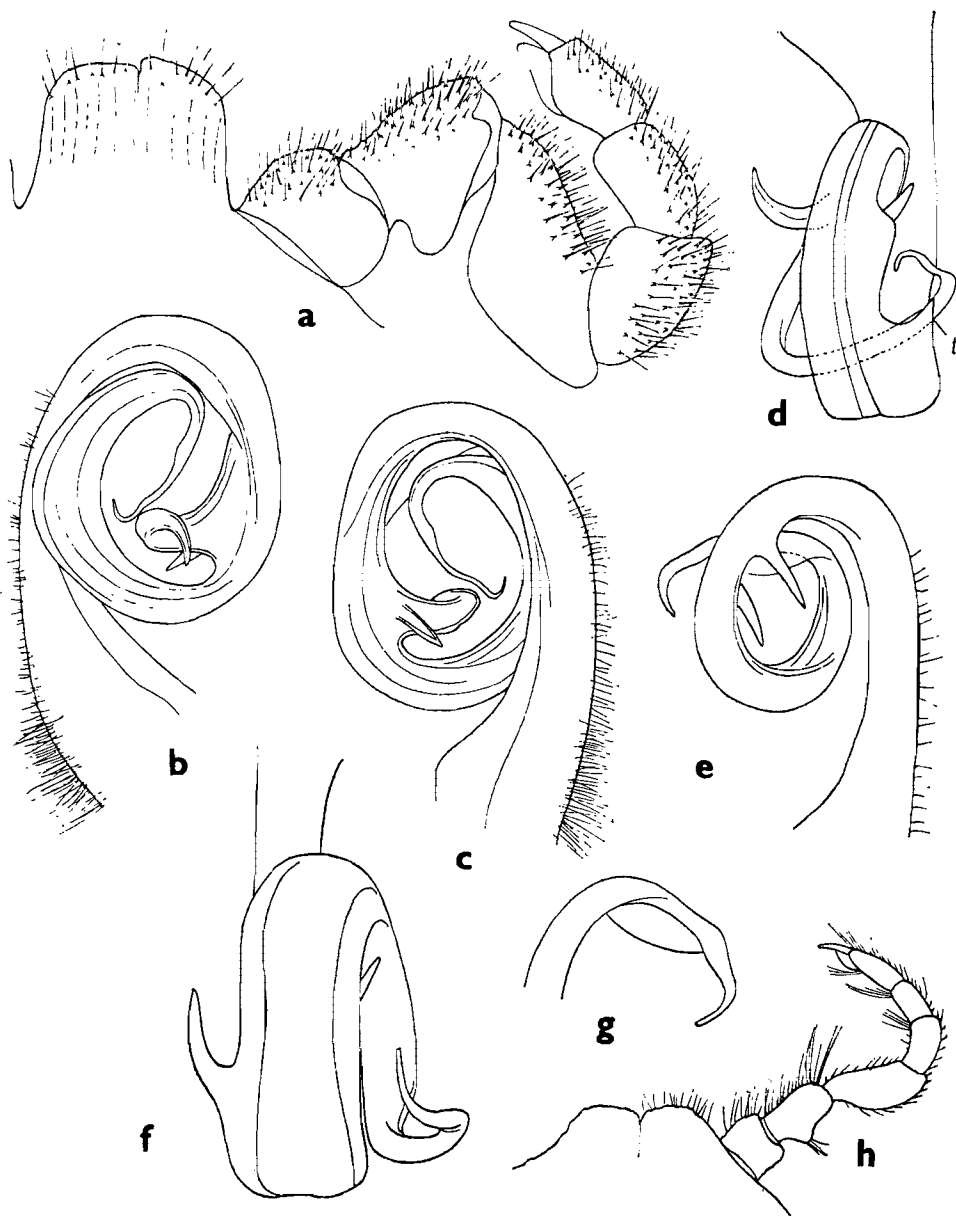
Ulodesmus munroi n. sp. Text-fig. 1a-d.

Types, 1 holotype ♂, 1 paratype ♂ (NM. 8909), Durban, collected by H. K. Munro, April 1957.

Colour.—Light yellow brown, the metasomites with a narrow darker posterior margination.

Dorsal surfaces.—Head smooth, shiny, 5-6 supralabral pits; collum distinctly narrower than second segment, the sides narrowed distally, the

TEXT-FIG. 1.



Ulodesmus munroi n. sp., ♂: *a*, sternal plate, segment VI; *b* and *c*, lateral and medial views of gonopods; *d*, gonopod, oral view. *Ulodesmus cultrifer* n. sp., ♂: *e*, gonopod, medial view; *f*, the same oral view; *g*, apex of telepodite enlarged, lateral view; *h*, sternal plate, segment VI.

lateral apices rounded and slightly produced forwards ; anterolateral but not posterior margins with a narrow grooved rim ; the raised margins of the keels somewhat pointed posteriorly, the pore situated in the posterior third or fourth and directed outwards and a little upwards ; keel of segment XVIII distinctly smaller than that of XVII, falling far short of posterior margin of XIX ; caudal process seen from above fairly pointed, triangular, 3 long setae at its apex and laterally 4 longer ones on each side of the posterior margin of this segment ; apex of caudal process seen from the side falling a little short of the anal valves ; metasomites shiny with very fine short creases and rugosities.

Ventral surface.—Sternite VI with a very large flat plate, text-fig. 1a, almost as long as wide, notched in the middle ; sternite VIII with a large conical process at base of each anterior leg covered with long coarse setae, posterior leg only slightly raised in this region, without a cone ; sternites sparsely covered with long coarse setae. Legs I–VII with large fleshy pads beneath the claw falling a little short of apex of claw ; prefemur of both legs of segment VI with a large rounded swelling dorsally in basal half ; legs covered with rather coarse granules, text-fig. 1a. mostly in the dorsal half of each segment. Gonopods very large and strongly chitinized, tightly flexed in a little more than two complete circles, text-figs. 1b, c ; just distal to the first bend, the main branch is greatly flattened with a lamelliform hood on the outer side, on the inner side the flattened margin of the lamella being produced into a sharp broad triangular tooth (*t*, text-fig. 1d) ; distal to this a large outwardly directed, spirally twisted tooth rising from a widened base on the under side of the main branch, text-fig. 1b, and from this base on the inner side a straight dagger-like tooth rises, text-fig. 1c ; apex of telepodite regularly narrowed, without accessory teeth or lamellae.

Dimensions : Width of metasomite 9.6, of prosomite 6.8, total length 43 mm.

The species, named in honour of its collector, Dr. H. K. Munro of the National Insect Collection, Pretoria, belongs to the *denticulatus*, *lawrencei*, *robustus*, group of large *Ulodesmus* species, but can be readily distinguished by the form of the gonopods from all of them.

Ulodesmus cultrifer n. sp. Text-figs. 1e–h.

Types, 1 holotype ♂, 1 paratype ♂ (NM. 8908), Pietermaritzburg, collected by A. Coetser, April 1962.

Colour.—Body light yellow, keels and legs lighter, dirty-white.

Dorsal surface.—Collum regularly narrowed laterally, the sides broadly cone-shaped, as wide as second segment ; pores directed more laterally than dorsally, situated on the posterior two-fifths of a broad raised lamella which is vase-shaped and rounded posteriorly ; keel of tergite XVIII as large as the preceding ones, projecting well beyond the posterior margin of tergite XIX ;

caudal process seen from above bluntly triangular, with 3 or 4 long apical setae; seen from the side it passes well beyond the anal valves whose margins have 2 long setae in dorsal half. Tergites almost entirely smooth, shiny, with some very faint small creases; towards the keels, and especially just mesially to them, the creases and punctures distinct though small and fine.

Ventral surface.—Sternite VI as in text-fig. 1*h*, the plate not much produced distally, considerably wider than long, partly divided by a median groove; sternite VIII without a cone, only a slight swelling at the base of the anterior legs on inner side, giving the sternite a slight concavity in profile.

Legs.—Pads present on legs of segments II–VI (legs I–VII), but weak and small in segment VI, the pad reaching to half length of claw, text-fig. 1*h*; prefemur of legs of this segment with only a weak dorsal swelling at base, text-fig. 1*h*.

Gonopods.—The telepodite forming $1\frac{1}{2}$ spirals, a long dagger-like tooth on inner side just distal to the first bend, text-fig. 1*e*; on the outer side opposite to it but a little more distal, another tooth of almost equal length and thickness but obscured by the overlying expanded portion of the main branch of telepodite so that it appears considerably smaller in text-fig. 1*f*; just before its apex the telepodite is provided with a hood-like transparent lamella shaped like a plough-share, text-fig. 1*g*.

Dimensions.—Greatest approximate width 3.8, total length approximately 18 mm.

The species probably resembles *U. micramma* Cook most closely in the shape of the gonopods.

FAMILY SPHAEROTRICHOPIDAE

Genus *Gnomeskelus* Attems

Gnomeskelus kambianus n. sp. Text-figs. 2*a*, *b*.

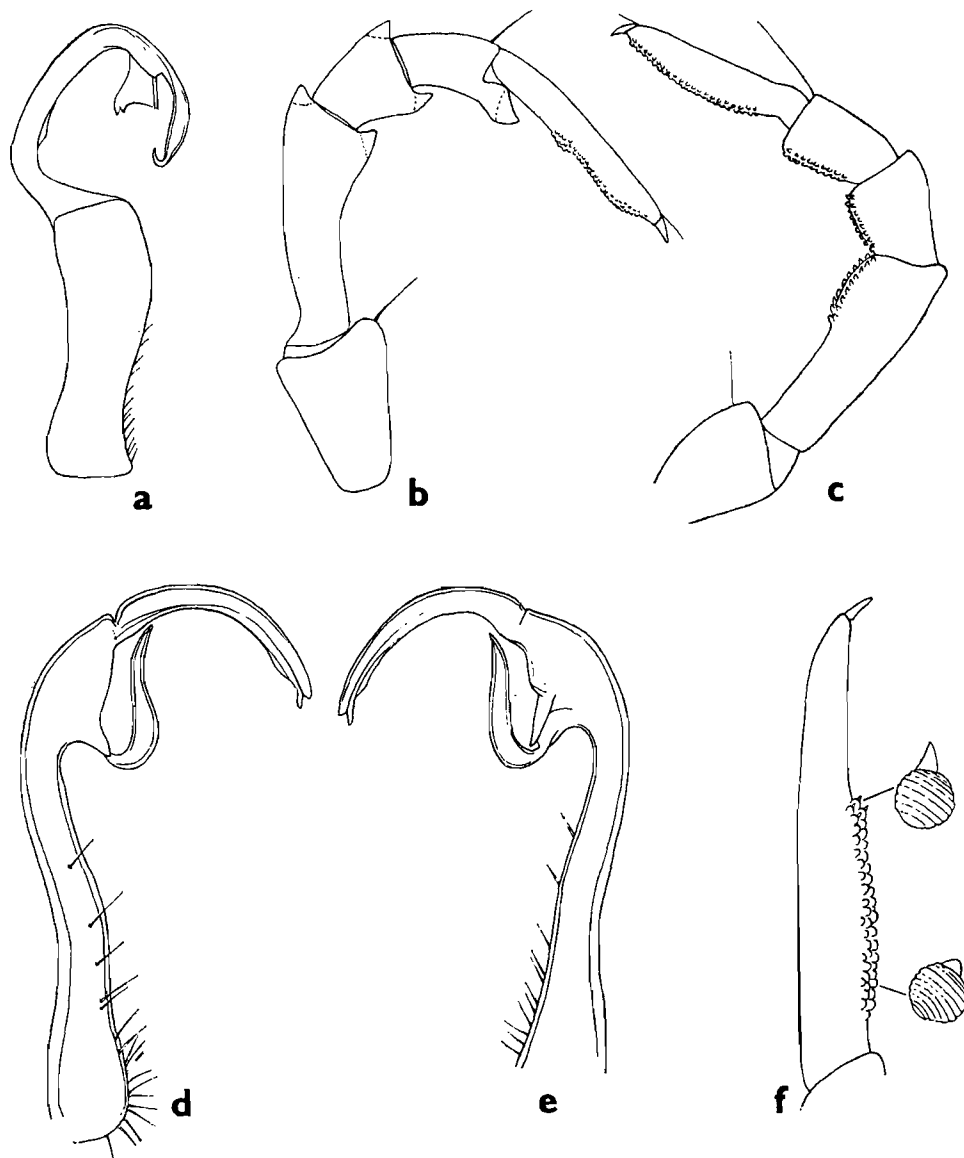
Types, 1 ♂, 1 ♀ holotype, 1 ♂, 2 ♀ paratypes (NM. 8204), Kambi forest, Umtata, collected R. F. Lawrence, November 1961.

♂. *Colour*. Background indistinctly reddish-brown, without well defined markings but metasomites in the middle with an ill-defined rounded darker marking continued along the posterior and lateral margins of the somites; legs in general light yellow brown, in some the apical segments darkened; antennae pale with irregular darker variegations.

Antennae with segment VI subparallel, about $2\frac{1}{2}$ times as long as wide, a little shorter than III; segment II a little longer than III.

Tergites.—Collum subequal to segment II in width but longer, the sides subconical apically, not reaching quite as far as the lateral borders of II, segments II and III subequal, IV a little wider than III, V distinctly wider than IV; postero-lateral angle of II rounded, of III with a distinctly produced pointed tooth, larger than in IV or V; from segment IX backwards the keels

TEXT-FIG. 2.



Gnomeskelus kambianus n. sp., ♂: a, gonopod; b, leg XIII. *Gnomeskelus elizabethae* n. sp., ♂: c, leg XIII; d and e, oral and aboral views of gonopods. *Gnomeskelus tembulicus* n. sp., ♂: f, tarsus of leg XIII.

ending in a pointed tooth but this very short and small; no accessory teeth on their posterior margins. Collum with 3 transverse rows of fairly long slender setae; metasomites with a single row of 4 widely separated similar setae anteriorly near the groove separating the prosomite; penultimate metasomite with a row of 10 setae along its posterior margin, all tergites dorsally otherwise quite smooth and shiny.

Legs in posterior half of body modified as in text-fig. 2b (leg XIII), only the distal three-fifths or half of tarsus with spherical bristles, femur, patella and tibia with bluntly triangular processes as in text-fig. 2b. Legs of segment VI and anterior segments without processes, the segments much stouter and shorter; in these legs whole of tarsus (which is quite straight ventrally), tibia and patella, distal third of femur, distal half of prefemur with close-set spherical bristles.

Gonopods as in text-fig. 2a, without parsolanomerit or tibio-tarsus, a large quadrate membranous lamella near the apex of telepodite; femur several times as wide as the remainder of telepodite, separated from it by a distinct suture.

Dimensions.—Greatest width 2.6, total length 21 mm. ♀. Much stouter, the legs normal, greatest width 2.8, total length 17 mm.

Gnomeskelus elizabethae n. sp. Text-figs. 2c-e.

Types, 1 ♂ holotype, 1 ♂ paratype (NM. 8185), Skoenmakerskop, Port Elizabeth, collected R. F. Lawrence, July 1961.

Colour.—Background of all tergites yellow, a narrow blackish margination on posterior border, an irregular blackish marking in middle of dorsal surface, quadratiform and wider than long in tergites II-V; lateral margins of all tergites with an irregular blackish border; legs light yellow; antennae light, a little dark apically.

Antennae short, segments II and III unusually so, considerably shorter than VI which is parallel sided and not wider than remaining segments.

Tergites.—Sides of collum fairly wide, the distal margins somewhat truncated, considerably longer than segment II in the middle; segments II-IV considerably narrower than V. Neither collum nor remaining segments with dorsal setae, even minute short ones, the surfaces smooth, without sculpturation and shiny; keels of tergites not pointed or produced at all posteriorly.

Legs rather short, without tubercles or processes in the middle segments, text-fig. 2c, (leg XIII); tarsus except at base with rows of contiguous spherical bristles; prefemur without, femur with bristles only in basal half; anterior legs even shorter than posterior ones but not differing much from them otherwise.

Gonopods as in text-figs. 2d, e, resembling in general those of *clavatus* from Mossel Bay, with a constriction above the femoral spine; at the base of and

just above the femoral spine on the aboral side a tooth, text-fig. 2e, which is not present in *clavatus*; canal branch slightly bifid at apex.

Dimensions.—Greatest width 1.7, total length 14 mm.

The species differs from *clavatus* Attems, described from Mossel Bay, in the details of the gonopod structure; the tarsi of the legs in the middle of the body also have 2 ventral tubercles in *clavatus*, none in *elizabethae*.

Gnomeskelus tembulicus n. sp. Text-figs. 2f, 3a, b.

Types, 1 ♂, 1 ♀ holotypes (NM. 8242), Qolora river mouth, Transkei, collected R. F. Lawrence, January 1962.

♂. *Colour*.—An indistinct blackish-brown marking in the middle of each metasomite, the sides with a very broad brown margination (except on the keel itself) giving, with the median marking, the effect of three brown longitudinal stripes on the dorsum, the lighter parts between rather mottled; legs yellowish basally, mottled darker distally; antennae entirely reddish-brown.

Antennae with segment VI somewhat flattened, much wider than segments II–IV, not much wider than V, II and III subequal, shorter than VI.

Tergites.—Collum broadly conical at the sides, falling well short of lateral margins of segment II which are produced outwards and slightly upwards; segment II unusually wide, much wider than III, IV a little wider than III, V much wider than IV; keels of III–VI with a distinct posterior tooth, of segments VIII backwards with a well developed, widely triangular tooth, though not pointed, no small accessory teeth mesially. Collum with 1 anterior row of bristles but remaining tergites quite smooth, unsculptured, without setae.

Legs in posterior half of body long and slender, tarsus as in text-fig. 2f (leg XIII), the anterior two-fifths without spherical bristles; tibia with bristles along its entire length, those of patella in two irregular groups, femur with 1 irregular row of well separated pointed cones, prefemur without; anterior legs shorter, stouter.

Gonopods.—Ventral opening for the gonopods on segment VII with a raised transparent quadrate lamella on its posterior border, deeply notched in the middle, the two halves each forming a square, this plate greatly resembling that found on sternite VI of *Ulodesmus* species but much smaller. Telepodites, text-figs. 3a, b, resembling those of *G. spiculifer* Lawrence, 1953, but differing in the following particulars: tibio-tarsus with only one lobe (two in *spiculifer*) directed outwards, not up and down; femoral spine curved round main branch but not pointed directly downwards; solanomerit differently shaped, longer, not bilobed as in *spiculifer*; a very stout, long seta, curved like a whip-lash just below the tibio-tarsus, is not present in *spiculifer*.

Dimensions.—Greatest width 1.5, total length 14.5 mm. ♀. Similar in colouring and setation, but considerably stouter; greatest width 2 mm., total length 16 mm.

Gnomeskelus hewitti n. sp. Text-figs. 3c-e.

Types, 1 ♂, 1 ♀ holotypes, 1 ♂, 1 ♀ paratypes (NM. 8189), Grahamstown veld Reserve, collected J. Hewitt, June 1933.

♂. *Colour*.—Tergites and legs in general, dirty light-brown, metasomites with a narrow, reddish-brown posterior margination, collum with a narrow anterior margination in addition, tarsi of legs with a reddish spot in distal half.

Antennae slender, segment VI not much wider than V, subparallel, more than twice as long as wide, a little longer than III.

Tergites.—Collum a little less wide than segment II, the sides narrowed but rounded apically, not reaching as far as those of II, its length in the middle exceeding that of II; segments II-IV of more or less equal width, forming a "neck", segment V considerably wider. Keels distinctly rounded posteriorly though weakly toothed in last 2 or 3 segments, the margins without notches; tergites and collum smooth not sculptured, apparently quite without setae.

Legs long and slender, tarsus about 6 times as long as deep, without ventral tubercles; remaining segments without dorsal or ventral processes; tarsus XIII thickly covered ventrally with a layer of spherical bristles except basal and apical sixth; tibia and patella similar but none in basal third or fourth, those on femur much less numerous, especially basally, forming 1-3 rows of well separated conical bristles, prefemur similar but with bristles only in apical half; tibia and patella of legs in segments II-VII rather swollen ventrally.

Gonopods more complex than in other species; a large blade-shaped par-solanomerit below the canal branch of telepodite which again divides into a flattened solanomerit and the sperm canal proper; tibio-tarsus with two branches, one of them long and sinuate, text-figs. 3d, 3e; all these processes smooth, without small accessory teeth or spicules; just before the constriction of the femur, a large, incompletely bilobed femoral? spine is given off on the inner side.

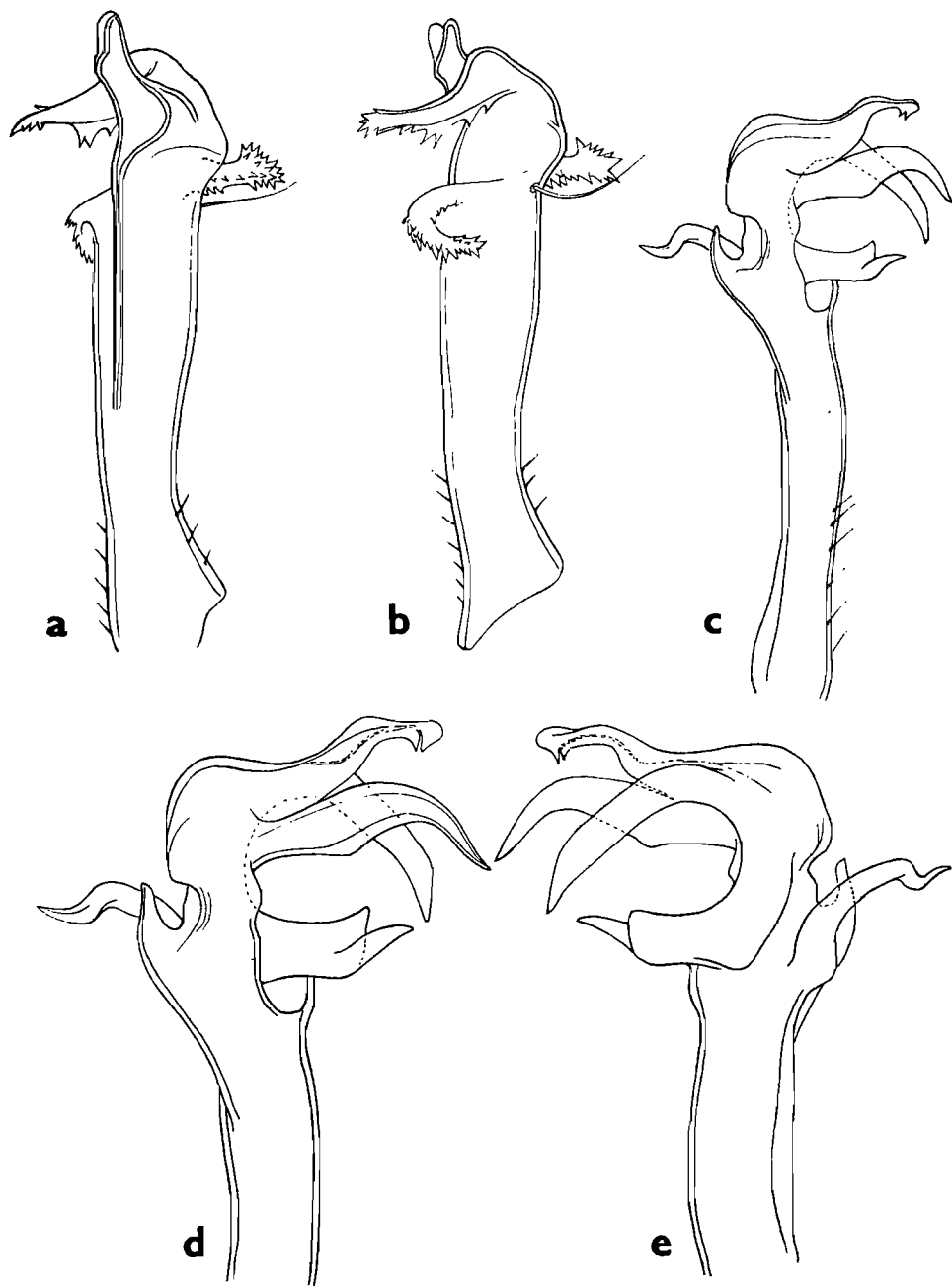
Dimensions.—Greatest width 2.6, total length approximately 20 mm. ♀. Similar to the male but conspicuously stouter; greatest width 3.1, approximate length 22 mm.

The species is named in honour of its collector, the late Dr. J. Hewitt, distinguished arachnologist and for many years Director of the Albany Museum, Grahamstown.

Gnomeskelus tristriatus (Attems)

Owing to an unfortunate *lapsus* this species, whose distribution was discussed in my paper "New Polydesmoidea from South Africa", Ann. Natal Museum, 15, pt. 14, pp. 159-160, 1962, was throughout incorrectly referred to as *G. triseriatus* (Attems).

TEXT-FIG. 3.



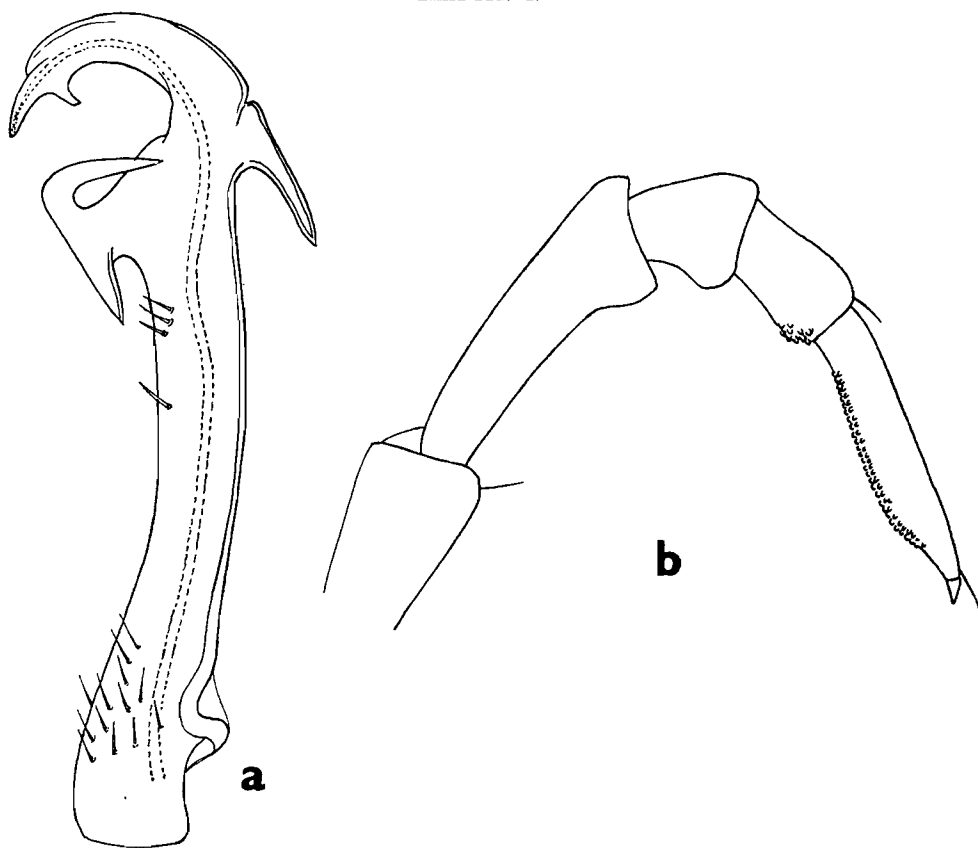
Gnomeskelus tembulicus n. sp., ♂: a and b, aboral and oral views of gonopod. *Gnomeskelus hewitti* n. sp., ♂: c, gonopod, aboral view; d and e, aboral and oral views of same, enlarged.

Gnomeskelus inermis n. sp. Text-figs. 4a, b.

Types, 1 holotype ♂ (NM. 8187), near Redhouse on the Sundays river, Cape Province, collected R. F. Lawrence, July 1961.

Colour.—Collum with a narrow anterior blackish margination; tergites without distinct markings but body with a vertebral darker stripe formed

TEXT-FIG. 4.



Gnomeskelus inermis n. sp., ♂: a gonopod; b, leg XIV.

by a diffuse rounded spot on each metasomite; antennae light violet, the four or five distal segments with a blackish apical ring; legs light, the distal segments a little darker.

Antennae short, segments II and III subequal, a little shorter than VI which is subparallel, a little narrowed at the base and $2\frac{1}{2}$ times as long as wide.

Tergites.—Collum with the sides falling only a little short of the lateral keels of II and subequal to it in width, III and IV only slightly less wide than II

and V and thus no distinct "neck". Keels on all tergites obsolete or quite absent, the postero-lateral angles of the tergites rounded. Collum without setae, tergites with 1 or 2 very short microscopic setae anteriorly just behind the transverse groove.

Legs.—Posterior legs with ill defined processes on femur and patella as in text-fig. 4*b* (leg XIV), tarsus without ventral tubercles; only tarsus and tibia at apex with spherical bristles, those of the tarsus in regular contiguous rows except at base and apex; anterior legs shorter, the segments much thicker, especially femur, all segments from prefemur to tarsus with spherical bristles ventrally.

Gonopods as in text-fig. 4*a*, the parsolanomerit with two horns, a small constriction above the tibio-tarsus separating the femur from the rest of the gonopod; tibio-tarsus peculiar in being directed downwards while in all other species it is pointed almost directly upwards.

Dimensions.—Greatest width 1.6 mm., total length 14.5 mm. The species resembles *G. bicornis* Schubart (1956, p. 63, fig. 39) from van Staden's Pass, near Port Elizabeth, in the bilobed structure of the parsolanomerit but differs radically in possessing a well developed tibio-tarsus of which there appears to be no vestige in *bicornis*.

CHILOPODA (GEOPHILOMORPHA)

Family ORYIDAE

Genus *Orphnaeus* Meinert

Orphnaeus heteropodus n. sp. Text-fig. 5*a-e*.

Holotypes 1 ♀, 1 ♂, paratypes 3 ♀, 2 ♂ (NM. 6794, 6984), Mt. Gorongoza, P.E. Africa, 1200 m., collected R. F. Lawrence, Sept. 1957.

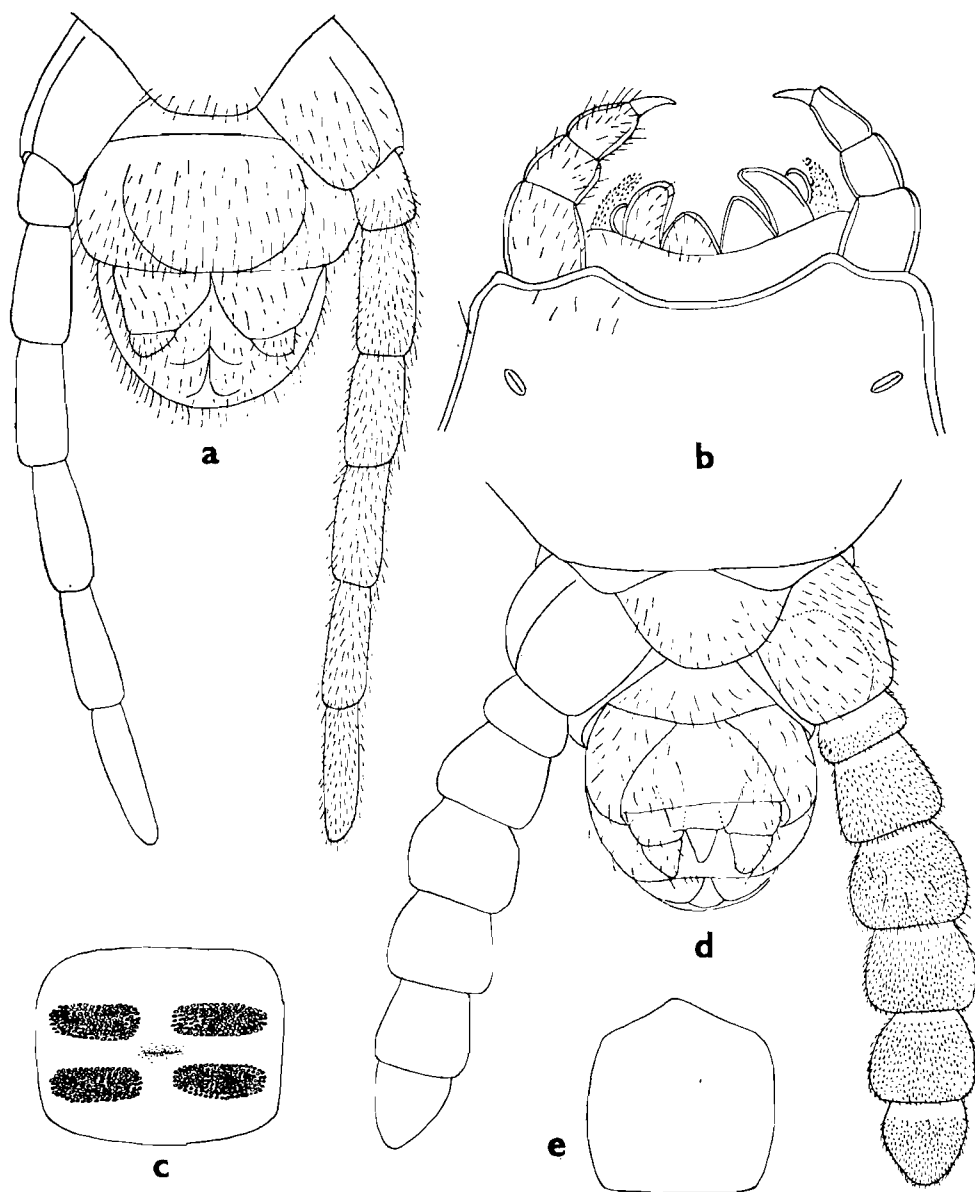
♀. *Colour* yellow, without markings.

Head considerably wider than long, wider posteriorly than anteriorly, the anterior margin forming an obtuse angle in the middle.

Tergites.—Paratergites visible from the XV–XVII segment backwards. All tergites with a pair of deep parallel median furrows reaching the anterior but not quite as far as the posterior margin of each tergite; between these a very faint stria on the anterior tergites becoming much stronger in the middle ones where it is a longish oval depression; an indistinct, more or less circular depression on each side of the median furrows in the middle segments, becoming progressively more accentuated in the posterior ones; from the middle segments backwards the tergites becoming more irregularly creased, the rounded impressions becoming elongate or arcuate but the anterior ones in general smooth and fairly shiny.

Sternites.—Anterior sternites with pores in two areas, an anterior and posterior, both transversely elongate, the posterior strip occupying the whole

TEXT-FIG. 5.



Orphnaeus heteropodus n. sp., ♀ : a, last segment, ventral view ; b, first and second maxillae ; c, sternite LXXI ; d, last segment of ♂, ventral view e headplate of ♂.

width of segment, the anterior one a little less but both large, the posterior margin of the anterior group convexly curved. From segments XLVI–XLIX the two areas begin to divide in the middle, thereafter completely divided into 4 groups separated by a distinct smooth, slightly raised, widely cruciform area with a transverse pit-like groove in its centre continued to the penultimate sternite, text-fig. 5c. Body and legs almost completely devoid of setae, even small ones.

Mandible with 5 lamellae, the basal one with 15, the apical one with 5 equal-sized, fairly large teeth, the last followed by a sharp bilobed tooth.

Maxillae.—First and second maxillae as in text-fig. 5b.

Genital legs as in text-fig. 5a, the last sternite very wide, ill defined. Females with 119 (type) and 120 pairs of legs.

♂. *Colour*.—Differing from the ♀ as follows: background yellow brown, from about segment XX a diffuse dark marking in the middle of tergite becoming progressively more clearly defined in the posterior segments as two short, parallel, blackish stripes (occupying the position of the median furrows) and continued to the penultimate tergite; from VIII–X backwards lateral margins of tergites with a small blackish dot, sometimes two in the posterior segments; pleurites in posterior half of body with irregular blackish markings. Sternites from VIII–XXVIII with a distinct blackish pattern marking or with a pair of black dots on the last 4 or 5 sternites.

Head about as long as wide, as wide in front as behind, text-fig. 5e.

Tergites with the median furrows much less deep and clear, absent altogether in the first six, the stria between them very faint, almost absent; even the anterior tergites with fine irregular creases, the creasing in general much more conspicuous than in the ♀; from tergite II backwards a large round, irregular, but distinct impression on each side of the segment.

Sternites irregularly creased, the arrangement of the porose areas as in the ♀ but the areas far less clearly defined or not so distinctly separated from each other.

Legs.—Genital legs and last sternite as in text-fig. 5d, the basal segment of the legs with a swollen glandular mass. Males with 57 (type), 60 and 65 pairs of legs (paratypes).

Dimensions.—Total length of ♀ holotype 99 mm., of ♂ holotype 35 mm. (largest paratype ♂, 44 mm.).

The species differs from all others in the great discrepancy in the number of legs pairs and body size of the sexes. The number of legs is about twice as great in the female while its body length is more than twice that of the male.

Orphnaeus brevilabiatu (Newport)

The Natal Museum has this species from thirteen localities, nine from the north-eastern Transvaal, three from Southern Rhodesia and one from Angola.

The number of legs is 67-77 in the male, most usually 73, and 73-85 in the female. One of the records from Rhodesia is a ♀ with 75 legs from Salisbury sent in by Dr. C. K. Brain who informs me that it is "capable of secreting a brilliant phosphorescent liquid which glows brilliantly for a minute or so before the illumination slowly fades."

Family MECISTOCEPHALIDAE.

Genus *Mecistocephalus* Newport

Mecistocephalus mossambicus n. sp. Text-fig. 6a.

Types, 1 holotype, 8 paratypes (NM. 6795), Gorongosa Mt., P.E. Africa, 1,200 m., collected Sept. 1957, R. F. Lawrence.

♀. *Colour*.—Head and first segment dull red, remainder yellow.

Head a little less than twice as long as anteriorly wide, parallel-sided in anterior two-thirds, slightly narrowed in remaining third, anterior margin straight; dorsal surface shiny with scattered pits in posterior two-thirds, especially in the middle near posterior margin.

Mouthparts.—Maxillipedes armed as in text-fig. 6a, on its inner side, coxosternum with minute well separated pits, divided in the middle by a shallow but distinct groove. Clypeus without smooth islands, the anterior half a little more than the posterior half, 2 small spines on each side just anterior to the division; pleurites very sparsely setose only in posterior half (about 12 setae), teeth of pleurites strong, curved a little inwards. Mandibles with 6 or 7 lamellae, from 7-12 more or less equal sized teeth in each; labrum smooth at the sides, a single tooth in the middle.

Sternites with the median groove not forked anteriorly, the grooves very wide and deep in the anterior segments, becoming much narrower and shallower in the posterior ones.

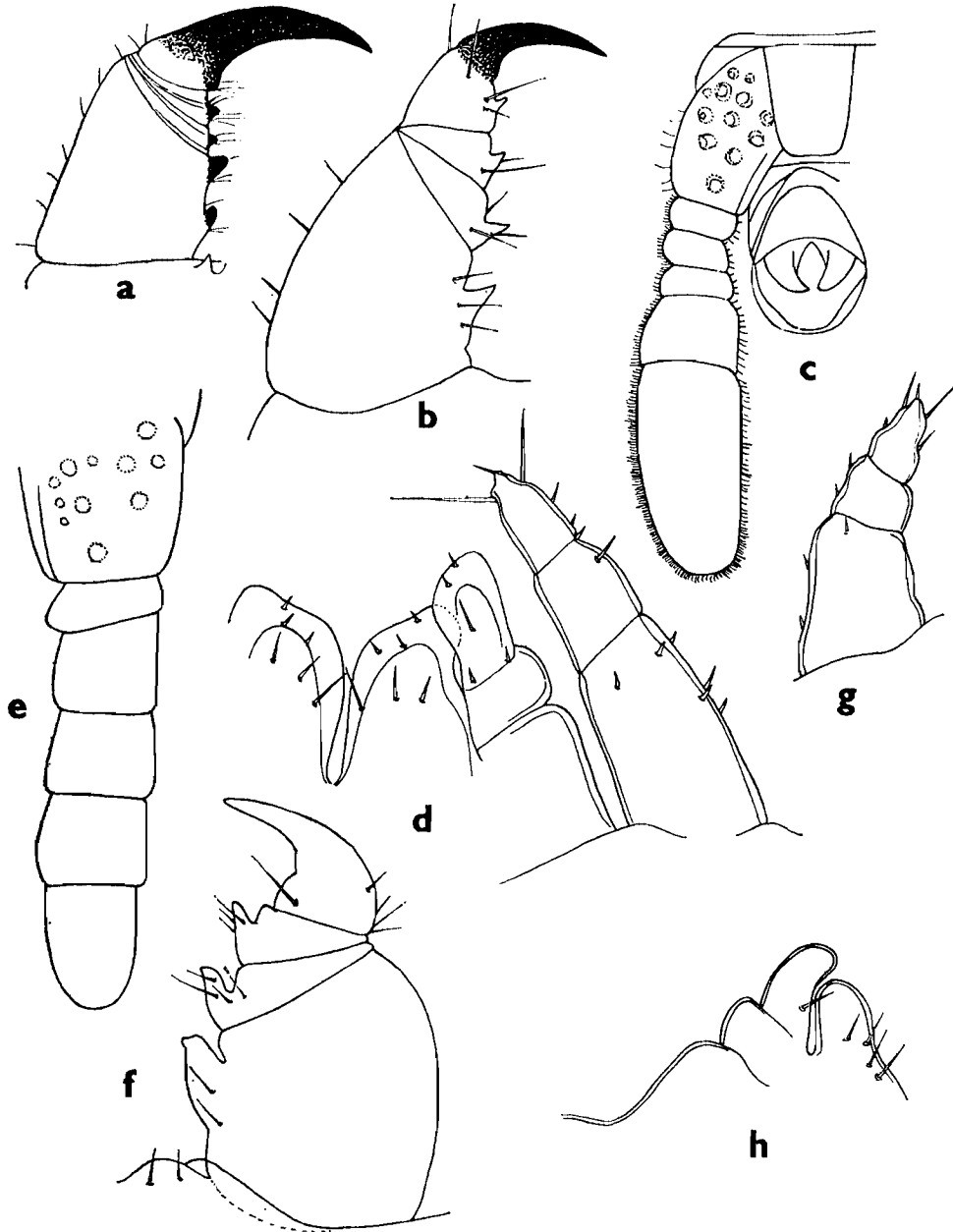
Legs with short fine setae, 49 pairs, coxae of the last pair with small well separated indistinct pores, these not numerous (about 15); last sternite indistinct, much wider anteriorly than posteriorly, posterior margin somewhat rounded.

Dimensions.—Total length 36 mm. in the largest specimen (holotype).

Other material.—Two specimens from Engwa, 28 miles SSE. of Umtali, S. Rhodesia (D. G. Broadley, 24.ix.61).

The species in Attems' key (1929, p. 128) can be grouped with *modestus* Silvestri and *apator* Chamberlain from New Guinea, Java and Celebes and in most of its characters it resembles these two species. It differs from *M. insularis*, the only other species recorded from Southern Africa (Umtali) in having the median grooves of the sternites undivided.

TEXT-FIG. 6.



Mecistocephalus mossambicus n. sp., ♀: a, maxillipede. *Geoperingueyia platypoda* n. sp., ♂: b, maxillipede; c, last leg, ventral view; d, first and second maxillae. *Geoperingueyia grandidens* n. sp., ♂: e, last leg; f, maxillipede; g, telepodite of second maxilla; h, first maxilla.

Family GEOPHILIDAE.

Genus *Geoperingueyia* Attems*Geoperingueyia platpoda* n. sp. Text-fig. 6b-d.

Types, 1 holotype ♂ (NM. 7807), Barberton, Transvaal, collected R. F. Lawrence, March 1960.

Colour pale yellow, the last segment, headplate and maxillipedes a little darker.

Head.—Antennae of uniform width throughout, the last segment long, parallel-sided, headplate longer than wide, the sides convex, anterior and posterior margins truncate, with fairly numerous setae of moderate length; clypeus without areas, a longitudinal row of 4 pairs of setae in the middle. Maxillipedes elongate, the inner margin with 3 distinct sharp teeth, base of tarsungulum with a much smaller but sharp distinct tooth, text-fig. 6b; first and second maxillae as in text-fig. 6d (right side only), apical segment of telopodite of maxilla II with only 2 long setae, middle segment entirely without these.

Tergites without median or lateral furrows; sternites in anterior two-thirds with a faint, very short median longitudinal furrow; tergites and legs with fairly numerous but very weak short setae. Body much constricted in anterior third forming a distinct "neck".

Legs.—Terminal legs as in text-fig. 6c, of very unusual shape, the last segment greatly elongate and flattened, paddle-like, this segment equal in length to the four preceding ones and about a third of the coxa combined, its lateral margin thickly, mesial margin sparsely covered with fine short fur-like setae; coxal pores 11-12, 2-3 of which are much smaller than the others, none of them covered by the last sternite, terminal pores invisible (*Attems* gives the presence of these pores generic status but they seem to be absent in *attemsi* Lawrence and the present species); last sternite very indistinct but rectangular and apparently longer than wide; 41 pairs of legs.

Dimensions.—Total length 21.5 mm.

The species is related to *attemsi* (based on a ♀ only) in the dentition of the maxillipedes but can be easily distinguished by the small number of leg pairs and coxal pores, the peculiar shape of the flattened last leg. Another specimen in the same tube is possibly the ♀ of this species, having the same dentition of the maxillipedes and 9-12 coxal pores; there are however 59 pairs of legs, the last with 6 segments (of which the apical one is clawless) and much more slender than in the male but differently shaped and less slender than that of the female of *attemsi*, the fourth segment a little thicker than the others.

Geoperingueyia grandidens n. sp. Text-fig. 6e-h.

Types, 1 holotype ♂, 2 paratype ♂♂ (NM. 8906) Qolora river mouth, Transkei, collected R. F. Lawrence, January 1962.

Colour in general yellow to light orange, the tergites but not the intercalary segments with a large rounded area on each side which is a little darker (light orange brown); in the last few segments these patches tend to coalesce so that the whole tergite including the intercalary segments are of this deeper colour; prescutellum and scutellum of each segment also darker.

Head.—Antennae with short sparse setae, those of the first 6 or 7 segments a little longer and sparser than in the remaining segments, not forming rows or whorls; headplate rounded at the sides, as wide as long, its posterior margin straight. Clypeus with uniform coarse reticulation, 11–12 short spines near anterior margin in the middle which is pointed to form an obtuse angle; maxillipedes as in text-fig. 6f, the inner tooth of basal segment unusually large, distinctly longer and thicker than the two distal ones, a small round button-like tubercle at base of the tarsungulum which is very wide basally. Mandibles with 21 pectinate teeth, the 3 or 4 basal ones much shorter and wider than the remainder which are subequal; telepodite of first maxilla 2-jointed, without lateral lobes, text-fig. 6h, but with an inner spine; telepodite of second maxilla, text-fig. 6g, with 2 long equal-sized spines and some shorter ones on apical segment.

Tergites and headplate with sparse, minute and very short setae, the numbers not increasing on posterior segments, those of the tergites arranged in 4–5 irregular transverse rows.

Legs with short fine setae of almost uniform length; terminal pair with 6 short wide segments, the third, fourth and fifth subequal, about two-thirds length of the last segment, text-fig. 6e; last sternite longer than wide, its posterior margin straight or slightly concave; coxae with 14–16 pores of unequal size (text-fig. 6e showing only distal two-thirds of the coxa), most of the mnot covered by the sternite; terminal pores conspicuous. Leg pairs 55–57.

Dimensions.—Total length 33 mm. (of longest specimen 37 mm.).

In the first paratype ♂ the number of pores are 16–21, the apical segment of the last legs almost twice as long as the penultimate; the second paratype ♂ with 21–22 pores.

Genus *Polygonarea* Attems

Polygonarea zambezia n. sp. Text-fig. 7e–g.

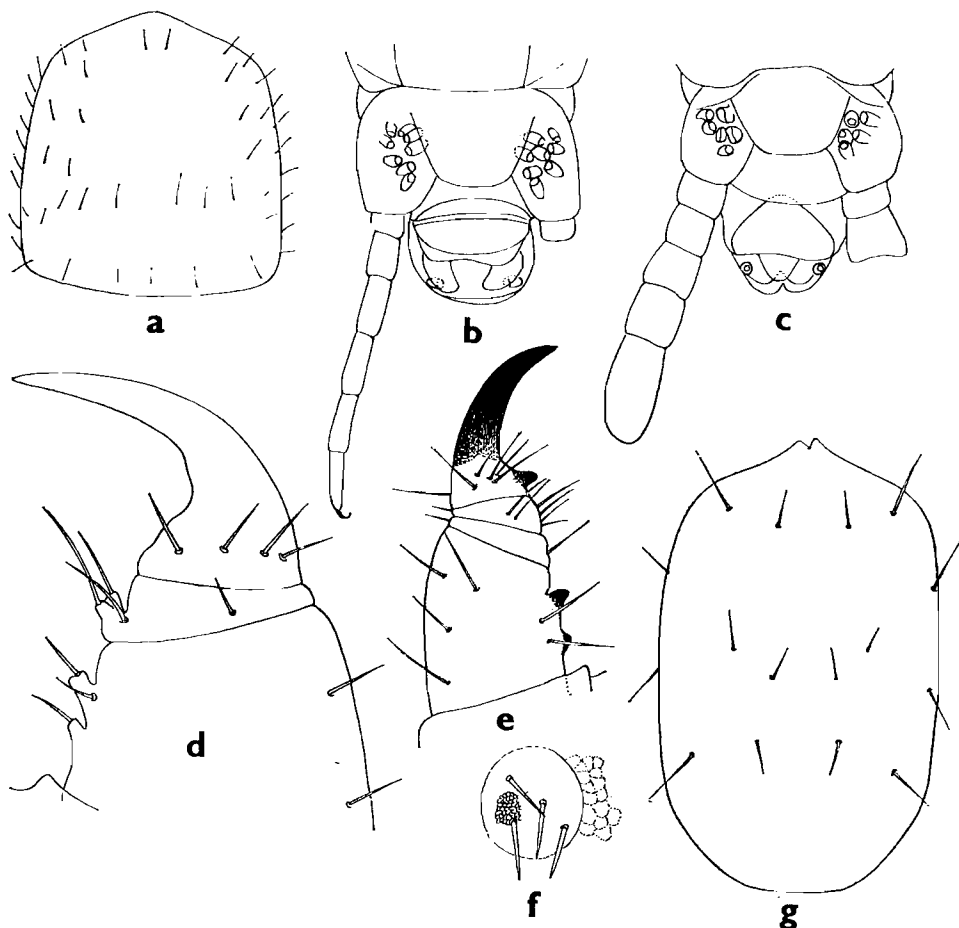
Types, 1 holotype ♂, 1 paratype ♂ (NM. 7222), Luabo, P.E. Africa, collected P. J. Stuckenberg, December 1957.

Colour yellow, head a little darker or yellow brown.

Head as in text-fig. 7g seen from above, a little more than $1\frac{2}{3}$ as long as wide, the few setae of dorsal surface long and symmetrically arranged. Antennae with two distinct whorls of long setae on segments I–VI, thereafter with numerous shorter irregular setae. Maxillipedes with a large conical tooth at

base of tarsungulum, text-fig. 7e, prefemur with at least one distinct conical tooth, a second proximal one rudimentary. Clypeus with subcircular area, text-fig. 7f, bearing 4 fairly short spines, in addition 1 on each side and 2

TEXT-FIG. 7.



Aphilodon transvaalicus n. sp., ♀: a, headplate; b, last segment, ventral view; c, the same of the ♂; d, maxillipede. *Polygonareia zambezia* n. sp., ♂: e, maxillipede; f, area of clypeus; g, headplate.

below the area. Middle section of labrum with a row of 12–13 small indistinct teeth, in addition a few longer fringes at the lateral corners; mandibles with about 7 large teeth. Second maxilla with coxal process reaching almost to apex of basal segment of telepodite; basal segment of telepodite with 1 spine in the middle, second segment with 4 inner, 1 outer spines, apical segment with

13–14 spines on inner margin, claw half length of segment on outer side ; first maxilla quite without spiculated lateral lobes, either on syncoxite or the basal segment of telepodite.

Tergites with widely separated, very indistinct furrows on anterior segments, much deeper on the posterior ones.

Sternites with a distinct median furrow ; second to penultimate sternites with pores forming a round area posterior to the middle, becoming progressively smaller posteriorly and lying in an oval depression of the median furrow ; in addition an anterior transverse band of less distinct pores. Sternite of last segment trapeziform, its posterior margin straight, narrower than anterior margin, its posterior two-fifths with a transverse band of dense spinules ; coxae with a rounded swelling laterally covered with similar spinules ; 6–7 large coxal pores ; last segment of end legs $1\frac{1}{5}$ as long as penultimate segment, claw long and slender ; 59 leg pairs (holotype) and 57 pairs (paratype).

Dimensions.—Total length 31 mm.

The species is obviously related to *oligopus* Attems in the setation of the antennae and other characters ; it differs in the large distinct tooth of the maxilliped prefemur, the arrangement of the pores, and in lacking spiculated lateral lobes on the first maxilla.

Genus *Aphilodon* Silvestri

Aphilodon transvaalicus n. sp. Text-fig. 7a–d.

Types, 1 ♂, 1 ♀ holotypes, 4 ♀ paratypes (NM. 6703), Rustenburg, Transvaal, collected in a vulture's nest (*Gyps coprotheres*) by Myers, November 1956.

♀. *Colour* yellow, headplate and one or two anterior tergites a little darker.

Head as in text-fig. 7a, a little longer than wide, the short setae mostly at the sides ; differentiated area of the middle of clypeus more or less trapeziform, not circular, a little longer than wide, with 18 spines ; anterior margin of clypeus with 3 longer spines on each side and a pair in the middle ; free edge of labrum smooth ; mandibles with only 14 teeth. Second maxillae much abbreviated, the apical segment of telepodite falling far below the apex of telepodite of first maxilla. Maxillipedes with 3 strong and bluntly tuberculiform teeth, the most distal one much larger and wider than the others, its apex indistinctly bifid, the setae at the apex of each tooth unusually stout, text-fig. 7d.

Tergites with a few extremely short fine bristles, almost smooth.

Legs.—Coxae of last segment with 8 large pores in a single aggregate, text-fig. 7b, one of these partly overlain by the lateral margin of sternite the posterior margin of which is truncate ; terminal pores conspicuous but not large ; end-legs with the last segment distinctly shorter than the penultimate one ; 69–73 pairs of legs. ♂. As in the ♀, last segment as in text-fig. 7c ; coxae with 5–6

large pores in a concentrated group ; end-legs very short, thick, last segment equal to the two to the preceding ones combined ; 65 pairs of legs.

Dimensions.—Total length of ♀ 30 mm., of ♂ 29 mm.

Aphilodon pauciporus n. sp. Text-fig. 8a-d.

Holotype, 1 ♀ (NM. 7847), Town Bush, Pietermaritzburg, Natal, collected R. F. Lawrence, July 1960.

Colour yellow, headplate and first tergite a little darker, the anterior tergites orange, a median and lateral area on each side a little more strongly chitinated, a narrow posterior margination on each tergite a little darker than the rest of segment ; sternites uniform light yellow, a narrow margination of the posterior borders darker, orange.

Head as in text-fig. 8b, with irregular scattered weak setae ; antennae $2\frac{1}{2}$ –3 times as long as headplate ; clypeus in the middle with a subcircular differentiated area of smaller reticulation, the surrounding parts with 20–22 short strong spinose setae ; below this area a pair of spines ; anterior margin of clypeus with 9–10 longer spinose setae on each side. Maxillae I and II as in text-fig. 8a, apical segment of telepodite of maxilla II with 2 bristles on one side ; labrum undifferentiated and smooth ; mandibles with a row of 22 equal-sized teeth. Maxillipedes as in text-fig. 8d, the tarsungulum without a basal tooth, the two teeth of the prefemur subjoined, rounded and small, that of the femur distal to it also rounded and bifid but large.

Tergites and legs with a coating of fairly numerous fine short bristles, those of the tergites seen from the side especially short and fur-like.

Legs.—Coxae of end-legs, text-fig. 8c, with 8 or 9 large unequal sized pores in two groups of 4 each, two large terminal pores equal to the largest of the coxal pores ; last segment of the end-legs distinctly shorter than the penultimate ; 69 pairs of legs.

Dimensions.—Total length 37.5 mm.

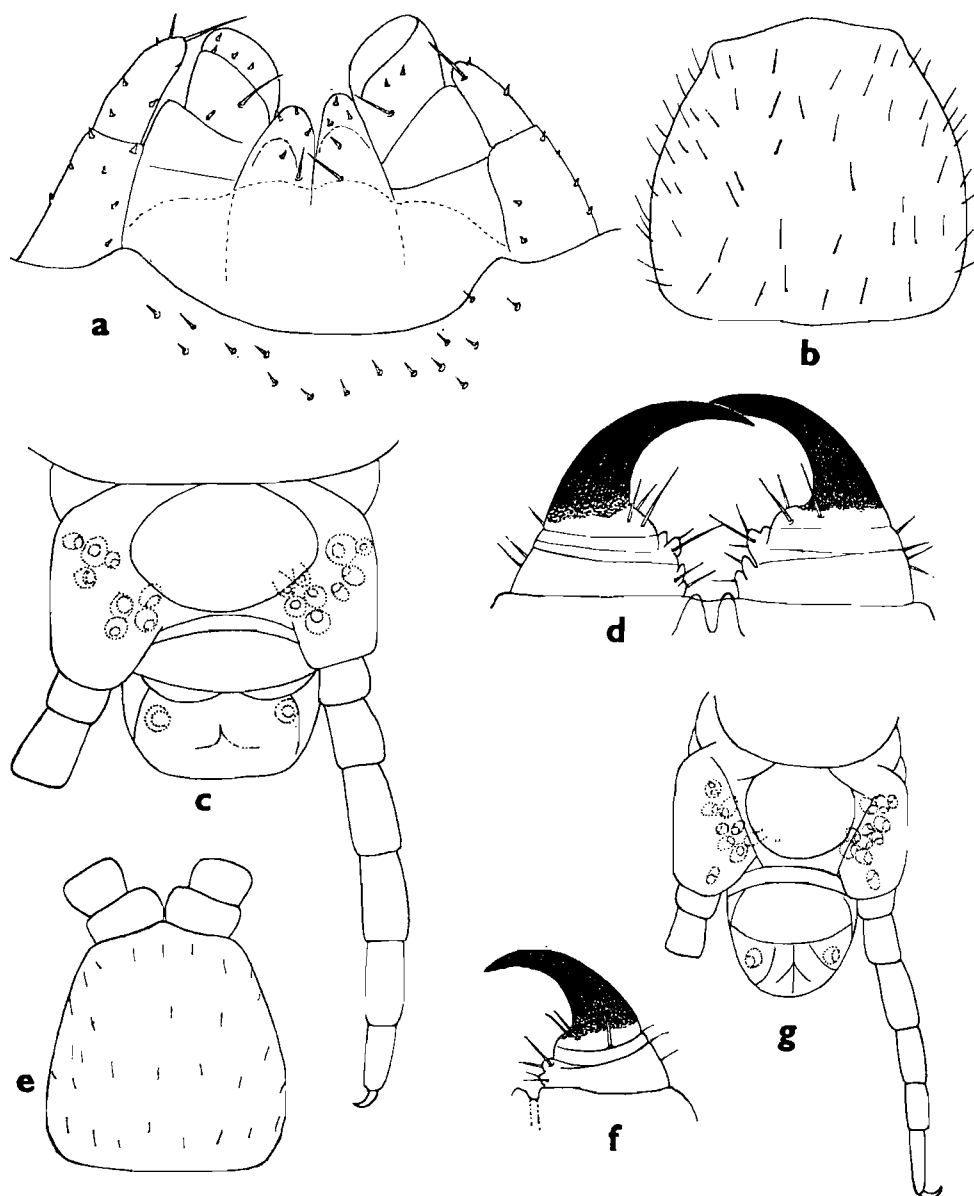
Aphilodon maritimus n. sp. Text-fig. 8e-g.

Types, 1 ♀ holotype, 2 ♀ paratypes (NM. 6822), Umhlali, North Coast, Natal, collected R. F. Lawrence, July 1957.

Colour as in *pauciporus*.

Head as in text-fig. 8e, the setae of the headplate short and less numerous than in *pauciporus*, the first antennal segment rounded and swollen on its inner side ; clypeus with a circular differentiated area containing 10 or 11 spinose setae, anterior margin with 7 or 8 on each side ; mandibles with 18 teeth ; maxillipedes very small and short, only the two teeth of the prefemur present, these rounded and very small, obsolete ; tarsungulum without an inner basal tooth, text-fig. 8f.

TEXT-FIG. 8.



Aphilodon pauciporus n. sp., ♀: a, first and second maxilla; b, headplate; c, last segment, ventral view; d, maxillipedes. *Aphilodon maritimus* n. sp., ♀: e, headplate; f, maxillipedes; g, last segment, ventral view.

Tergites and legs with less numerous bristles than in *pauciporus*.

Legs.—Coxae of end-legs with 9–11 pores of very unequal size, the distal (most posterior) pore well isolated from the others, one of the pores partly covered by the sternite which is semicircular; terminal pores as large as the largest coxal pores. End-legs as in text-fig. 8*g*, the last segment longer than the penultimate; 87 pairs of legs, 83 and 85 in the paratypes.

Dimensions: Total length 38 mm.

Two ♀♀ from Qolora River mouth, Transkei (NM. 8907) appear to belong to this species, differing only in the smaller number of legs, 73 and 75 pairs respectively.

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